Biology 100, Course syllabus,

Fall 2021 – CRN = 10569

Dr. Ahrar

Semester	Fall 2021	Instructor Name	Dr. Mohammad Ahrar
Course Title & #	Biology 100	Email	Mohammad.ahrar@imperial.edu
CRN #	10569	Webpage	**N/A**
Room	Online	Office	Online
Class Dates	Aug. 16 to Dec. 11, 2021	Office Hours	Online
Class Days	Not synchronized online	Office Phone #	Dept. # 760-355-6155
Units	4 Units		

Course Description:

A comprehensive one semester general biology course for non-majors. Includes life from the molecular to the organismic level of both plants and animals and their interactions within the environment. Special emphasis is put on human biology within appropriate areas of study. Appropriate for general education as well as nursing, pre-professional, and higher-level biology courses. Includes laboratory component. (CSU) (UC credit limited. See a counselor.)

In an online class, all course activity occurs online; there are no required real-time or on-campus meetings. All content is delivered in Canvas. Coursework does have due dates as set by the instructor, but can be completed, once the content becomes available, at any time before the due date. At the start of the semester, a detailed schedule for the term with specific content availability and due dates of coursework, including potential online proctored summative/high-stake assessments, such as a mid-term or final, will be posted on IVC's Schedule Site.

This course includes laboratory components. Since the campus is closed during the Fall semester, the lab experiments will be done at your home.

Student learning outcomes:

Upon course completion, with a grade of "C" or better, the successful student will have acquired new skills, knowledge, and/or attitudes as demonstrated by being able to:

1. Demonstrate an understanding of the steps of the scientific method. (ILO2)
2. Communicate an understanding of the various patterns of inheritance of genetic traits. (ILO1 & ILO2)
3. Explain how the processes of natural selection influence evolution. (ILO1 & ILO2)
4. Perform lab activities properly, and correctly analyze lab data. (ILO1 & ILO2)

Course Objectives:

Upon satisfactory completion of the course, students with a grade of "C" or better will be able to:

1. Identify the basic characteristics of all living things.
2. Name basic chemical aspects that pertain to life and the concept of homeostasis
3. Describe the subcellular components for the cell including their structure and function

4. Explain the light and dark reactions of photosynthesis
5. Explain cellular respiration and its relations to the entire organism.
6. Demonstrate knowledge of the structure and function of DNA and RNA.
7. Explain protein synthesis and site the central dogma of cell biology.
8. Compare and contrast the fundamentals of asexual and sexual reproduction.
9. Define ecology and the overall impact of ecology to conditions in the environment.
10. Solve problems in general genetics and in human genetics and relate advances in genetics to social responsibility of geneticists.
11. Identify and relate the functions of the major systems of the human body; the interrelationship among body systems and nature of disease.
12. Classify organisms in the kingdoms of plants and animals, discuss their evolutions and their relationships.

Textbooks & Other Resources or Links

Lecture Textbook: Biology Concepts and investigations (3rd edition) by Marielle Hoefnagels –
SBN: 9781308487663
Publisher: McGraw-Hill.

Laboratory: Lab activities in this online class will not be done in the school lab. Instead, the experiments will be modified to accommodate for online course and be posted on Canvas. Lab assignments will be posted weekly and you will have 4 days to work on them and post them on canvas.

Course Requirements and Instructional Methods

Prerequisite - MATH 098 or MATH 091 with a grade of "C" or better.

Lecture information- This Fall 2021 Biol-100 class will be totally online and asynchronous. Lecture materials, such a Power point (PPT) slides and class assignments will be posted on Canvas on Mondays every week during the course for the students to study and do the class works. Course materials covered in this online class will be the same as the regular on-campus classes, and students will gain as much information from this online class as any other biology classes. It is the responsibility of the students to manage their time and learn the class materials.

Lab assignments – The lab assignments basically supplement the lecture PPT materials and students will learn lot of information from their lab reports. The lab experiments are modified for online class. The instruction for each lab will be posted on Canvas weekly. Students should work on lab assignments, and answer all the questions, and post the complete work on canvas on weekly basis. For the experiments that require wet lab, and we cannot perform them online, we may use short videos that demonstrate the experimental procedures. Students will get 4 to 6 points for each completed lab assignments. The due dates for the students to post the lab reports are shown in the table on the last page.

Research project: Each student will be assigned a topic related to biology to research. The research projects will develop your scientific research capability and will expand your knowledge about Biology beyond the textbook. The information about research projects will be discussed later during the course.

Extra credit: There may be extra homework related to biology for extra credit. This can allow students to gain more information about different aspects of biology beyond the class activities.

Written assignments: Students will be assigned a topic related to some chapters in the textbook to write an essay about the topic. Complete report will receive 20 points (not an extra credit). There will be 3 written assignments during the course.

Quizzes and exams: There will be 8 quizzes and 5 exams during the course. The online class schedule, and the information about the lesson plans, lab assignments, quizzes and exams dates are listed in the last page in this syllabus. Questions in the quizzes and exams come from the materials from lectures power points, chapter summary, Lab assignments, and information from any video clips assigned to the class. A variety of testing methods will be employed, including but not limited to true/false, multiple choice, and short essays.

Missing tests and lab assignments; any missed quiz, exam or lab assignment will not be allowed to retake. In case of emergencies or excused situations (with written documentation), a quiz or a test may be taken, but there will be 20% deductions from any retake test.

Course Grading is Based on Course Objectives

Total of 8 quizzes, each 20 points …….. 160 points

Total of 5 Exams, each 100 points ..... 500 points

Total of 15 Lab assignments (5 points each) ..... 75 points

Written assignments …… …… 60 points

Research project ……..... 40 points

Total Points ..... 835 points

Grading scale: >90% = A, 80% - 89% = B, 70% - 79% = C, 60% - 69% = D, <60% = F

Grade point calculation = Total points earned divided by 835 x 100. Example; if your total earned points is 740, your grade point will be calculated as 740: 835 X 100 equals 88.6 % = "B" grade.

The grades for all class assignments and tests will be posted on Canvas and updated weekly and will be available to you to monitor your progress during the course.

Attendance

- Attendance is critical to student success and for IVC to use federal aid funds. In the online classes, attendance means doing all the class activities and assignments on time and respond to any announcement within a 12-hour period. Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absence exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See the college General Catalog for details.
- Absences attributed to the officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.
- Acceptable indications of attendance include - submission of assignments, quizzes, exams by due dates. The students are expected to participate in online class discussions and respond to emails and announcements. Logging on Canvas alone is NOT adequate to demonstrate academic attendance by the student.

Academic Honesty

- *Plagiarism* - is to use and present the writings or ideas of others as one's owned, without citing the source. You should understand the concept of plagiarism and keep it in mind no copies without mentioning the source is allowed when preparing written materials, writing an article, and taking exams.
- *Cheating* - is defined as fraud, deceit, or dishonesty in an academic assignment or using or attempting to use materials, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct.

Additional Help – Discretionary Section and Language

- Canvas support center: Imperial Valley College has switched from Blackboard to Canvas. Tutorials (see below) are available to students through the Canvas, you tube, on direct contact to the student services.
- Power point presentations, class materials, assignments, and grades can be posted on Canvas and be accessible to the students during the course.

Student information, Rights and Responsibilities

Students have the right to experience a positive learning environment. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762
Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313 if you feel you need to be evaluated for educational accommodations.

Anticipated Class Schedule / Calendar during the Fall 2021 semester (subject to change)

Week	DATE	Lecture topics and exam schedule	Lab report topic and exam due dates
1	Aug. 16 - 21	**Ch. 1 Scientific study of life**	**Lab report 1 part A due by 8/18/2021**

2	Aug. 23 - 28	**Ch. 2 The Chemistry of life**	**Lab report 2 due by 8/25/2021** **Quiz 1 (Ch. 1, 2) - 8/26/2021**
3	Aug. 30 – Sept. 4	**Ch. 3 Cells**	**Lab report 3 due by 9/1/2021** **Quiz 2(Ch. 3) - 9/2/2021**
4	Sept. 7 - 11	**Ch. 4 The energy of life** **Results of the bean project to be posted**	**Lab report 4 due by 9/8/2021** **Exam 1 (from Ch. 1 to 4) – 9/9/2021**
5	Sept. 13- 18	**Ch. 5 Photosynthesis** **Written assignment 1 due**	**Lab report 5 due by 9/16/2021**
6	Sept. 20 - 25	**Ch. 6 How cells release energy**	**Lab report 6 due by 9/22/2021** **Quiz 3 (Ch. 5, 6) - 9/23/2021**
7	Sept. 27 – Oct. 2	**Ch. 7- DNA Structure- Gene function.** **Ch. 8 DNA Replication and cell division**	**Lab report 7 due by 9/29/2021** **Exam 2 (from Ch. 5 to 8) – 9/30/2021**
8	Oct. 4 - 9	**Ch. 9 Sexual reproduction and Meiosis** **Research projects due**	**Lab report 8 due by 10/6/2021** **Quiz 4 (Ch. 9) - 10/7/2021**
9	Oct 11- 16	**Ch. 10 Patterns of Inheritance** **Written assignment 2 due**	**Lab report 9 due by 10/13/2021** **Quiz 5 (Ch. 10) - 10/14/2021**
10	Oct. 18 - 23	**Ch. 12 Forces of evolution** **Ch. 13 Evidence of Evolution**	**Lab report 10 due by 10/20/2021** **Exam 3 (Ch. 9, 10, 12) 10/21/2021**
11	Oct. 25 - 30	**Ch. 16- Evolution-diversity of plants** **Written assignment 3 due**	**Lab report 11 due by 10/27/2021** **Quiz 6 (Ch. 13, 16) – 10/28/2021**
12	Nov. 1- 6	**Ch. 17- Evolution-diversity of animals** **Ch. 19- Communities and Ecosystem**	**Lab report 12 due by 11/3/2021** **Exam 4 (Ch. 13, 16, 17) 11/4/2021**
13	Nov. 8 – 13*	**Ch. 24 The nervous system and the senses**	**Lab report 13 due by 11/10/2021** **Quiz 7 (Ch. 19, 24) - 11/10/2021**
14	Nov. 15- 20	**Ch. 28 Regulating temperature, Nutrients**	**Lab report 14 due by 11/17/2021** **Quiz 8 (Ch. 28) – 11/18/2021**
	Nov. 22 - 27	**Thanksgiving Holiday – No class**	
15	Nov. 29 – Dec. 4	**Ch. 30 Animal reproduction**	**Lab report 15 due by 12/1/2021**
16	Dec. 6 - 11	**Exam 5- Final Exam (Ch. 19, 24, 28, 30)**	**Should be taken Thursday. 12/9/2021**

*** Holidays: Thursday Nov. 11, 2021 & Thursday Nov. 25, 2021**